UPS-ST24 300W UBNT

UPSPro™ Backup Power System

- Wireless Base Stations
- Surveillance Cameras
- Remote Gate Control
- Electric Fence
- Up to 192W loads

Congratulations! on your purchase of the UPSPro™ outdoor backup power system. Please take a moment to review this Qwik Install Guide before assembly or battery installation.

STOP

DANGER! Avoid Powerlines!
You Can Be Killed!

When following the instructions in this guide take extreme care to avoid contact with overhead power lines, lights and power circuits. Contact with power lines, lights or power circuits may be fatal. We recommend to install no closer than 20 feet to any power lines.

Safety: For your own protection, follow these safety rules.

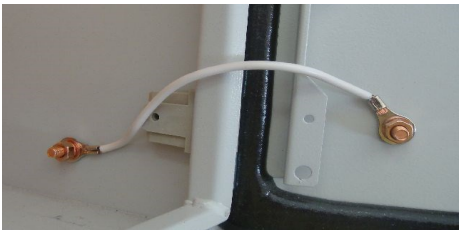
- **Perform as many functions as possible on the ground**
- **Do not attempt to install on a rainy, windy or snowy day or if there is ice or snow accumulation at the install site or if the site is wet.**
- **Make sure there are no people, pets, etc. below when you are working on a roof or ladder.**

Recommended Tools: Phillips Screwdriver, 13mm and 10mm Open End Wrench, 8mm nut driver, Flat Blade Screwdriv-

Please help preserve the environment and return used batteries to an authorized depot

Qwik Install

STEP 1: Add Grounding Wire Between Door and Enclosure: Remove plastic covers on copper studs on inside of door and inside of enclosure. Add jumper wire between 2 copper studs and use copper washers and nuts to secure.

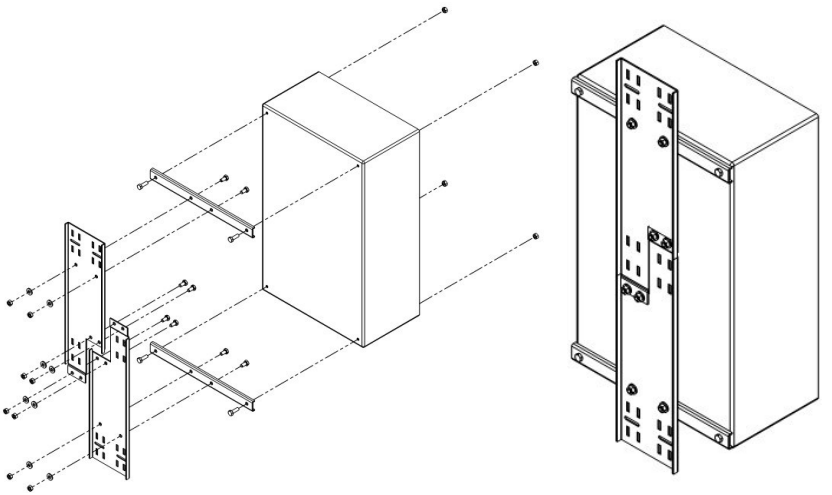


STEP 2: Add wire feedthrus into

the bottom connector plate. Attach the connector plate to the bottom of the enclosure using self tapping screws provided.

STEP 3: Install hole plug in drain hole in bottom right corner of the enclosure.

STEP 4: Mount the DIN rail to the door using screws provided. Mount any extra equipment to the orange backplate and secure the backplate in the enclosure. Note: The DIN rail can also be mounted to the orange backplate if desired.



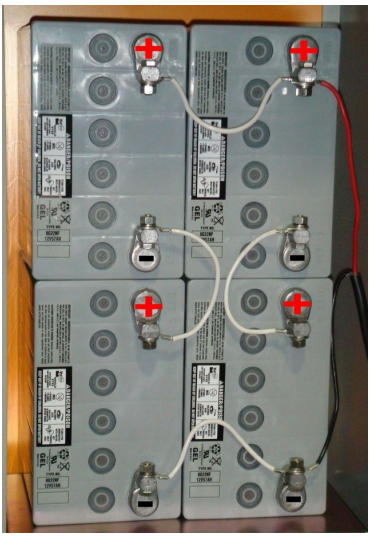
STEP 4: If pole mounting the enclosure, assemble the pole mount kit to the back of the enclosure and mount the enclosure to a pole using the 6 hose clamps provided. The enclosure can also be wall mounted using the 4 holes in the back of the enclosure.

STEP 5: Insert the battery platform in the bottom of the enclosure. The battery platform has cutouts so wires can be routed under the battery as needed.

STEP 6: Attach the green DIN Rail adapters to the 8 port POE switch using the screws provided. Clip the POE switch to the DIN rail. Connect a cable from the controller LOAD output to the 8 port POE switch green voltage in connector V+ and V-. There are two V+ and two V– inputs. Either input is fine to use. Just make sure polarity is correct.

STEP 7: Install the batteries in the enclosure. If using multiple batteries, connect in series for 24V output.

24V two battery and 24V four battery configurations are shown below. Batteries are connected in series, with Plus(+) connected to Minus(-).



STEP 8: If batteries are installed on their side make sure to apply an insulator to the top of the battery terminal to prevent the battery terminals from shorting to the metal enclosure in case the battery shifts inside the enclosure during an earthquake.

STEP 9: Set the proper voltage on the AC input of the controller by removing the metal tab and then switching the input voltage to 120VAC or 240VAC depending on your source voltage. Be sure to replace the metal tab to ensure that somebody doesn't accidentally switch the voltage as this will damage the controller.

STEP 10: Connect the battery cables to the controller , then to the battery. Be sure to observe proper polarity. Black wire connects to battery negative terminal and BATTERY(-) terminal on the controller.

STEP 11: When a battery is connected properly the BATT LED will be green. Make sure that the Battery Type is selected correctly and never change the battery type during charging or this could damage the controller. Use GEL for GEL or AGM batteries. Use WET for standard lead acid wet cells. Tycon recommends using only GEL or AGM batteries for best performance.

The controller has battery overdischarge protection to disconnect the load if the battery voltage (charge) is too low. The LOAD LED will be on when the battery charge is within safe limits and the LOAD output is turned on.

LED Indicators

LOAD (Load Power is Turned On = Green)
PWR (AC Power On = Yellow)
BATT (Battery is Connected = Green)
CHD (Battery is Fully Charged = Green)
CHG (Battery is Charging = Yellow)
WET / GEL – Switch is positioned to WET(Green) or GEL (Yellow)

STEP 12: Switch off controller and connect AC to the controller. Be sure to follow local regulations for outdoor 120/240VAC connections.

STEP 13: Connect the load to the controller LOAD terminals. Be sure to observe proper polarity. Switch on the controller to activate the charging.

STEP 14: Plug or Tighten all wire feedthrus. If they don't tighten on a small diameter wire, you can wrap some electrical tape around the wire in the seal area to increase its diameter and make a better seal. The enclosure needs some small amount of venting so be sure NOT to seal all holes and feedthrus with silicon.

STEP 15: Make sure lid gasket is clean and free from any particles, then carefully close the cover, making sure that wires are clear of the seam and hinge area. Use the special key to close the two cover locks.

SPECIFICATIONS

Subject to change without notice

	UPS-ST24-UBNT
Load Voltage (DC)	24V +/- 5%
Max Load Output	12A
Min Load Output	1A
Available Storage Capacities	2 battery 51Ah 1200VA 4 battery 102Ah 2400VA
Battery Type	Valve Regulated Sealed Lead Acid / GEL
Battery Life	5 Years
Charge Voltage	WET Equalize = 28.8V, Float = 26.4V GEL Equalize = 28.4V, Float = 27V
Over-discharge protection	21.5V Load Off 25.2V Load On
Self Consumption	<5.5W
POE Switch Output	7 POE Ports 24VDC @ 2A per port max 1 Uplink Port
POE Switch	10/100Mb IEEE802.3/802.3u Auto Crossover
POE Protections	Over Temp, Over Current, Short, Over/ under voltage, Surge
VAC Input +/- 10%	Selector Switch 120VAC / 240VAC , 50/60Hz
VAC Input Current	3.5A @ 115VAC / 1.8A @ 240VAC
Fuse	6A Internal Replaceable
Enclosure Type	Powder Coat Steel
Operating Temperature	-30°C to +60°C

TECH CORNER

Additional Information you may find useful

1. **CONTROLLER:** The controller turns off power to the load 21.5 and reconnects when the battery reaches 25.2V. This protects battery from overdischarge and increases battery life and performance. Note: The load will turn on immediately as soon as AC power is restored.

2. CAPACITY: The UPSPro™ UPS-ST24 is rated at 192W load output. It can deliver 288W to the load but then the power available for battery charging is too small, so we recommend not to exceed 192W to the load for best performance.

3. VENTING: The enclosure is vented thru the wire feedthrus and various hole plugs in the bottom of the enclosure. Don't make these airtight with silicon

4. BATTERY MAINTENANCE: The batteries used in the UPSPro systems don't require any maintenance. They should last up to 5 years in normal use. **Note: Never store batteries for any length of time in a discharged state or it will kill the battery.**

5. BATTERY OVERDISCHARGE: We highly recommend hooking all equipment loads to the controller voltage output. This output will disconnect the load if the battery voltage drops below the set voltage and this will protect the battery from over-discharge. If batteries get completely discharged because the equipment was connected directly to the battery, you will reduce the battery life. Discharged batteries will freeze at very low temperatures.

6. ACCESSORIES: Tycon also offers a variety of voltage conversion products to meet almost any need. Just visit tyconpower.com for more info.

Limited Warranty

The UPSPro™ products are supplied with a limited 24 month warranty which covers material and workmanship defects. This warranty does not cover the following:

- Parts requiring replacement due to improper installation, misuse, poor site conditions, faulty power, etc.
- Lightning or weather damage.
- Physical damage to the external & internal parts.
- Products that have been opened, altered, or defaced.
- Water damage for units that were not mounted according to user manual.
- Usage other than in accordance with instructions and the normal intended use.

NOTES